



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,379	11/14/2001	Ji Hyun Hwang	MRE-0040	6698
34610	7590	08/18/2004	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			TRINH, MINH N	
			ART UNIT	PAPER NUMBER
			3729	

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,379

Applicant(s)

HWANG ET AL.

Examiner

Minh Trinh

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5,7-21 and 25-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-30 is/are allowed.
- 6) ☒ Claim(s) 5,11,12,15,20 and 21 is/are rejected.
- 7) ☒ Claim(s) 7-10,13,14 and 16-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Receipt is acknowledged of the "conditional" request for RCE application is acceptable and a RCE has been established. An action on the RCE follows.

An Office action on the merits of claims 5, 7, 8-21 and 26-30 as follows.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 5, 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber et al (US 5,725,140) in view of Asai et al (5,294,035).

Weber et al disclose a feeder for surface mount device comprising: mainframe 10, a parts feeding unit 10 having a vinyl separation unit and a vinyl recovery unit (see Fig. 1) a drive system 50 operatively associated the feeder to drive each of the parts feeder 10 and the vinyl separation unit and the vinyl recovery unit (see Fig. 1, and the discussed at col. 4, lines 23-25). Weber et al do not teach a forward and backward rotational force-generating device operatively associated with the drive system. Asai et al disclose the above feature (see the discussion at col. 7, lines 35-53 and col. 9, lines 57-col. 10, lines 15). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to employ the Asai's teaching as described above in to the invention of Weber et al in order to form a desired structure including means for

rotation forward and backward associated thereof. It is noted that reference 50 or 52 of Weber et al are represented the claimed "a drive system" of the present invention.

Limitation of claim 12 is also met by Weber et al (see Fig. 1, shows the parts feeding being communicated with the drive system by a first gear train 50).

As applied to claim 20, Weber et al disclose that the vinyl separation unit and the vinyl recovery unit (see Fig. 1) are driven synchronization (or at the same time) by the drive system 50.

4. Claims 5, 6, 11-12, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawksell (4,687,152) in view of Asai et al (5,294,035).

Hawksell discloses a feeder for surface mount device comprising: mainframe 30, a parts feeding unit 36 having a vinyl separation unit 68 and a vinyl recovery unit 70 (see Figs. 2-3, and the discussed at col. 5, lines 5-10), a drive system operatively associated the feeder to drive each of the parts feeder including the vinyl separation unit 68 and the vinyl recovery unit 70 (see Fig. 2). Hawksell does not teach a forward and backward rotational force-generating device operatively associated with the drive system. Asai et al disclose the above feature (see the discussion at col. 7, lines 35-53 and col. 9, lines 57-col. 10, lines 15). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to employ the Asai's teaching as described above in to the invention of Hawksell in order to obtain a means for rotation forward and backward associated thereof. Further, It is noted that references

68 and 70 of Hawkswell are broadly readable on "a vinyl separation unit and a vinyl recovery unit " as claimed by the present invention.

As applied to claims 6 and 11, Hawkswell discloses the drive system comprising a forward rotational force-generating device 52 (see Fig. 2 and the discusses col. 5, lines 65-col. 6, line 5), and the force generating device 52 being between the parts feeding 36 and the vinyl separating unit 68 (see Fig. 2, shows the described the configurations above).

Limitation of claim 12 is also met by Hawkswell (see Fig. 2, this figure depicts the parts feeding 36 is in rotational communication with the drive system 52 by at least one of driven wheels 50, 46 (gear train).

As applied to claim 15, Hawkswell discloses the separation unit 68 being associated with at least a second gear train such as 46 (see Fig. 2). Noting the reference 46 of Hawkswell represented a second gear train as claimed by the present invention).

As applied to claim 20, Hawkswell shows the vinyl separation unit 68 and the vinyl recovery unit 70 being driven synchronization (same time) by the drive system 52.

5. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weber et al or Hawkswell in view of Asai et al as applied above and further in view of Witte (US 6,162,007).

Weber et al or Hawkswell as modified and relied upon above do not teach the use of a positioning sensor to sense a rotational position of a drive gear of the drive

Art Unit: 3729

system as recited in claim 21. Witte discloses such concept for example: the use of a sensor 45 (see the discussion at col. 17, lines 15-20 and col. 18, lines 1-6). Therefore, it would have been obvious to one ordinary skill in the art, at the time of the invention to modify the structure invention of Weber or Hawkswell by employing the teaching of Witte's position sensor for positioning and controlling of component in order to obtain a desired feeder unit. The motivation for these combination references being discussed at col. 13, lines 26-39 of Witte reference).

Allowable Subject Matter

6. Claims 7-10, 13-14 and 16-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 25-30 are allowed.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Prior art references are cited for their teaching of a feeder device for surface mounting apparatus.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Trinh whose telephone number is (703) 305-2887.

The examiner can normally be reached on Monday -Thursday 8:00 am to 4:30 pm.

Art Unit: 3729

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (703) 308-1789. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7307 for regular communications and (703) 305-3579 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

A handwritten signature in black ink, appearing to read 'M. Trinh', followed by a horizontal line.

M. Trinh 8/12/04
Patent Examiner Group 3700

mt